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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/748,197

12/31/2003

Chang-Seob Kim

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6732

49455

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11/25/2009

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EXAMINER

LAIOS, MARIA J

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

11/25/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptomail@smiplaw.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/748,197	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> MARIA J. LAIOS	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8,12,14,20-22 and 24-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20080711</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 9 September 2009 has been entered. Claims 1-3, 5-6, 8, 12, 14, 20-22, 24-28 have been amended and currently pending. Claims 4, 7, 9-11, 13, 19-20 and 23 are cancelled.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 112***

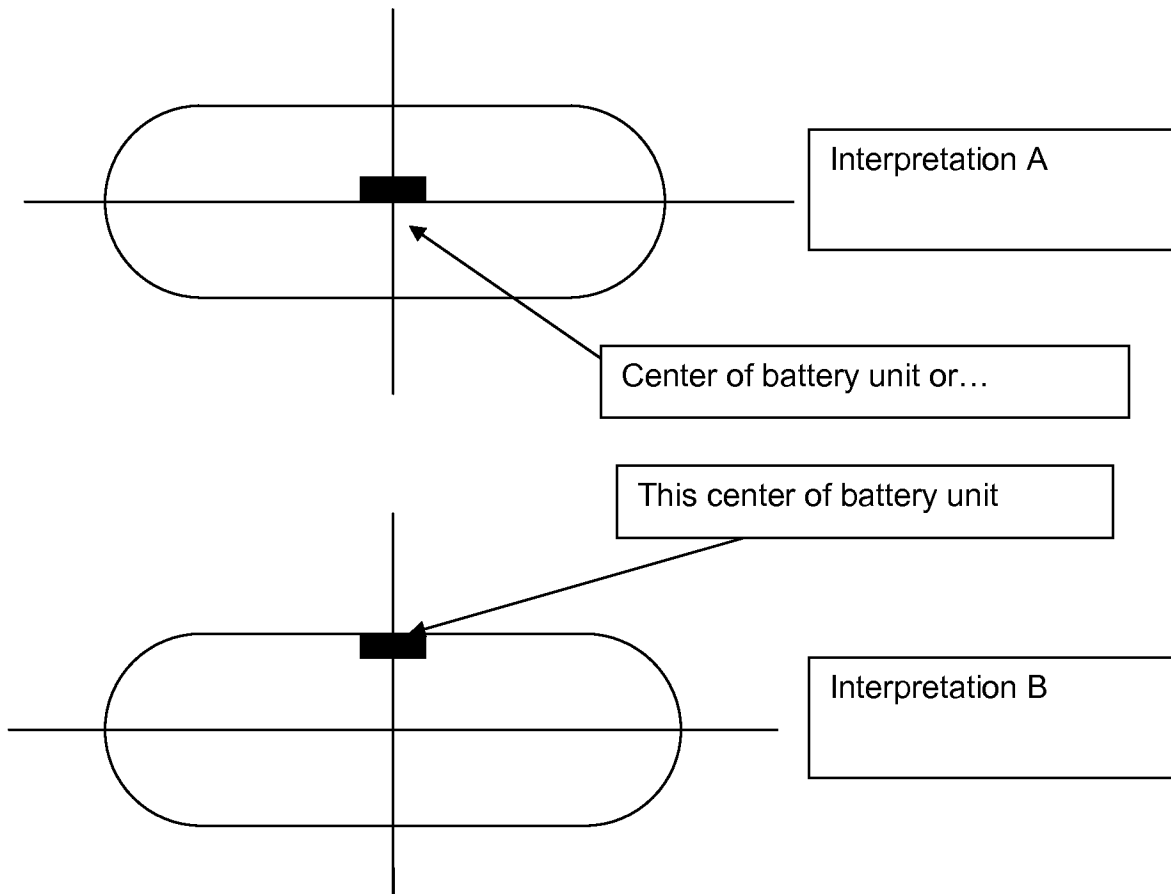
3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 8, 14 and 20 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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The claims states the first tab...is disposed at substantially the center of the battery unit... however it is not clear whether this indicated the center of the roll or positioned on the outer edge in the center.



***Claim Rejections - 35 USC § 103***

5. The claim rejections under 35 USC 103(a) as being unpatentable over Sugita et al. (US 6,432,578 B1) for claims 1-4, 7, 8, 10, 13-15, 20 and 23-26 are withdrawn because the claims have been amended or cancelled.

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6. The claim rejections under 35 USC 103(a) as being unpatentable over Sugita et al. (US 6,432,578 B1) and Narukawa et al. for claims 5, 6, 12, 21, 22, 27, 28 are withdrawn because the claims have been amended.

7. Claims 1-3, 8, 14, 20 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narukawa et al. (US 5,834,133).

As to claims 1, 8, 14 and 20, Narukawa et al. disclose a lithium battery-(col. 6 lines 27) (Figure 1); a can (casing-1); a cap assembly connected to an upper portion of the can (Figure 1) and having a cap plate and an electrode terminal (7) connected to the cap plate (6) through a terminal through hole (figure 1) formed in the cap plate and having a gasket (8, 9) at an outer surface for insulation from the cap plate and jelly roll type battery unit. Where a jelly roll type battery unit comprising a first electrode (Figure 4) having a current collector (224) with a first active material (225) on one side of the current collector; an exposed portion of the current collector (224-Figure 4) with an electrode tab (222) located in the uncoated portion; a second electrode (Figure 5) having a current collector plate (234); a second active material (235) coated on the surface of the current collector plate (Figure 5); a second electrode tab attached to the current collector (231) and a separator (4) interposed between the two electrodes (Figure 1). The first tab is incorporated into the first electrode current collection uncoated portion (Figure 4) and is formed by folding a cut potion toward the upper edge (Figure 11) of the current collector and extending past the upper edge of the current collector (Figure 11). The first tab is located in the center of the battery unit (col. 14

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lines 39-43 because it is on the side of the rolling starting end of the electrode roll).

Narukawa et al. does not explicitly state the cut portion begins at the lower edge of the first current collector and extends along more than half the width however Narukawa et al. teaches the tab can be cut to size (col. 42-44). Therefore one of ordinary skill in the art at the time of the invention would be known to lengthen the tab such that it extends from the bottom edge of the current collector to more than halfway the width of the current collector electrode for a battery requiring a specific tab size. Narukawa does not explicitly disclose the first electrode tab partially overlapping and facing the second electrode tab; however, Narukawa does disclose the tab to be formed in any portion of the plate (col. 10 lines 60-61). Therefore it would have been obvious to place the electrode tabs of the battery unit of Narukawa in a location where, upon wind up of the jelly roll unit, the tabs partially overlap each other because it has been held that rearranging parts of an invention involves only routine skill in the art (*In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950)). See MPEP 2144.04 (VI). Furthermore it is noted that a tri-functional electrode as defined by the applicant is the current collector, the tab, and the active material on the current collector.

As to claim 2, Narukawa et al. discloses the first electrode tab is located at the start of the winding (col. 14 line 42-43).

As to claim 3, Narukawa et al. discloses the first electrode tab is at the winding completion portion of the current collector (at the outermost of the roll-Figure 1).

By including all of the structural elements of claims 1 and 2, the apparatus is capable of performing the functions recited in claims 24-26. While features of an

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apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997) “[A]pparatus claims cover what a device is, not what a device does.” Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (*MPEP* 2114).

8. Claims 5, 6, 12, 21, 22, 27 and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Narukawa et al. (US 5,834,133) as applied to claim 1-3, 8, 14, 20 and 24-26 above, and further in view of Narukawa et al. (U.S. Patent Number 5,508,122 hereinafter ‘122).

The disclosure of Narukawa et al. has been discussed above and is incorporated herein.

Narukawa et al. do not teach the use of an insulating tape adhered to either surface of the first or second electrode tab.

Narukawa et al. ‘122 teach that the lead connecting regions, or electrode tabs, are covered with insulating tape (column 1, lines 14-16, as applied to claims 5, 12, and 21). Narukawa et al. ‘122 teach that each electrode tab positioned at the outmost has

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insulating tape on the side toward the center of the spiral electrode, or between the inner and outer surfaces of the first and second electrode tab (column 1, lines 56-59, as applied to claims 6, 22, 27, and 28).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the insulating tape of Narukawa et al. '122 in the battery of Narukawa et al. The insulative tape is used to prevent an internal short circuit (column 1, lines 15-16). Having the insulating tape positioned between the inner and outer surface of the first and second electrode tab, would assure that each lead will not touch another electrode (column 1, lines 59-60).

Furthermore, by including all of the structural elements of claim, the apparatus is capable of performing the functions recited in claims 27 and 28. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429,1431-32 (Fed. Cir. 1997) “[A]pparatus claims cover what a device is, not what a device does.” Hewlett-Packard Co. v. Bausch & Lomb Inc., 909 F.2d 1464, 1469, 15 USPQ2d 1525, 1528 (Fed. Cir. 1990). A claim containing a “recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus” if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987) (*MPEP* 2114).



***Response to Arguments***

9. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection as necessitated by amendment.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIA J. LAIOS whose telephone number is (571)272-9808. The examiner can normally be reached on Monday - Thursday 10 am -7 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on 571-272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/M. J. L./

Examiner, Art Unit 1795

/Dah-Wei D. Yuan/

Supervisory Patent Examiner, Art Unit 1795